UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 9

75 Hawthorne Street
San Francisco, CA 94105-3901

April 25, 2022

MEMORANDUM (sent via email only)

SUBJECT: Passive Sub Slab Depressurization (SSD) System Operation and Maintenance Plan (Document Control Number [DCN] FY22SEMD_161) and Evaluation of Passive SSD System, Former TRW Microwave Site, Sunnyvale, California

FROM: Mathew Plate, Environmental Scientist
Quality Assurance Branch

MATHEW PLATE
Digitally signed by MATHEW PLATE
Date: 2022.04.25 12:43:12 -07'00'

THROUGH: Audrey L Johnson, Manager
Quality Assurance Branch

Audrey L Johnson
Digitally signed by Audrey L Johnson
Date: 2022.04.25 12:35:04 -07'00'

TO: Lilian Abreu, Remedial Project Manager
Superfund Division California Sites

Michael Schulman, Remedial Project Manager
Superfund Division California Sites

These documents provided by Northrop Grumman for the Former TRW Microwave Site, dated March 31 and April 15, 2022, were reviewed based on guidance provided in the following documents:

- *OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air* (USEPA OSWER, June 2015)
- *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air, Final*, (California Department of Toxic Substances Control, October 2011)
- *Vapor Intrusion Mitigation Advisory, Final*, (California Department of Toxic Substances Control, October 2011)

The O&M Plan and SSD Evaluation would benefit from a more thoughtful evaluation of SSD system engineering.

Questions or comments regarding this review should be referred to me at (415) 972-3799.

Lilian Abreu, Michael Schulman
April 25, 2022

Concerns

1. [O&M Plan; Annual Inspection Protocol] This section notes that inspections are limited to the roof components. Elements of inspection should also include:
    - Verification that the floor slab and barrier system have not been breached or otherwise compromised.
    - Evaluation to confirm that the building has not been modified in a manner that could compromise the system.
    - Evaluation of changes to building use. (this could be changes in mechanical operations or changes in exposure scenarios that we not envisioned when the system was designed).

2. [O&M Plan; General] A building-specific inspection checklist should be developed and included with this plan.

3. [O&M Plan; Appendix A, Passive SSD System Design Drawings] The design drawing should be updated to reflect the current building configuration.

4. [SSD Evaluation; Duct] The design selected introduces long horizonal duct runs and several duct bends on the roof. These features will reduce the effectiveness of the system by causing resistance to air flow.

5. [SSD Evaluation; Vent height] The current height proposed does not appear to be sufficient to clear obstructions. Clearing obstructions is important for dispersion of pollutants and to provide sufficient exposure to wind (which provides part of the driving force for proper passive SSD operation).

6. [SSD Evaluation; Location of HVAC intakes] The HVAC intake location is mislabeled. Please correct this and verify that the other HVAC intakes were properly located.